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 NEWS 5 NOV 30 PHAR reloaded with additional data
 NEWS 6 DEC 01 LISA now available on STN
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current-awareness          alerts (SDIs) affected
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current-awareness          alerts (SDIs) affected
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annotations enhanced
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reloaded

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V7.01a, CURRENT          MACINTOSH VERSION IS V6.0c(ENG)
AND V6.0Jc(JP),          AND CURRENT DISCOVER FILE IS DATED
10 JANUARY 2005

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FILE LAST UPDATED: 13 Mar 2005  (20050313/ED)

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=> s (cetyltrimethylammonium(w)bromide)/bi,ab     10900
CETYLTRIMETHYLAMMONIUM/BI              7782
CETYLTRIMETHYLAMMONIUM/AB            248555
BROMIDE/BI             89103 BROMIDE/AB
L1       8328 (CETYLTRIMETHYLAMMONIUM(W)BROMIDE)/BI,AB

=> s (cetyltrimethylammonium(w)chloride)/bi,ab     10900
CETYLTRIMETHYLAMMONIUM/BI              7782
CETYLTRIMETHYLAMMONIUM/AB            1021953
CHLORIDE/BI            385943 CHLORIDE/AB
L2       1898
(CETYLTRIMETHYLAMMONIUM(W)CHLORIDE)/BI,AB

=> s (cetyltrimethylammonium(w)hydrosulfate)/bi,ab     10900
CETYLTRIMETHYLAMMONIUM/BI              7782
CETYLTRIMETHYLAMMONIUM/AB               314
HYDROSULFATE/BI              186 HYDROSULFATE/AB
L3         2
(CETYLTRIMETHYLAMMONIUM(W)HYDROSULFATE)/BI,AB
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CETYLTRIMETHYLAMMINIUM/AB 2
HYDROSULPHATE/BI 2 HYDROSULPHATE/AB
L4 0
(CETYLTRIMETHYLAMMINIUM(W)HYDROSULPHATE)/BI,AB

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CETYLTRIMETHYLAMMONIUM/AB 2
HYDROSULPHATE/BI 2 HYDROSULPHATE/AB
L5 0
(CETYLTRIMETHYLAMMONIUM(W)HYDROSULPHATE)/BI,AB

=> s (tetradecyltrimethylammonium(w)bromide)/bi,ab 1527
TETRADECYLTRIMETHYLAMMONIUM/BI 707
TETRADECYLTRIMETHYLAMMONIUM/AB 248555
BROMIDE/BI 89103 BROMIDE/AB
L6 1188
(TETRADECYLTRIMETHYLAMMONIUM(W)BROMIDE)/BI,AB

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OCTADECYTRIMETHYLAMMONIUM/BI 0
OCTADECYTRIMETHYLAMMONIUM/AB 248555
BROMIDE/BI 89103 BROMIDE/AB
L7 0
(OCTADECYTRIMETHYLAMMONIUM(W)BROMIDE)/BI,AB

=> d his
(FILE 'HOME' ENTERED AT 13:51:29 ON 14 MAR 2005)
FILE 'CAPLUS' ENTERED AT 13:51:52 ON 14 MAR 2005
L1 8328 S
(CETYLTRIMETHYLAMMONIUM(W)BROMIDE)/BI,AB
L2 1898 S
(CETYLTRIMETHYLAMMONIUM(W)CHLORIDE)/BI,AB
L3 2 S
(CETYLTRIMETHYLAMMONIUM(W)HYDROSULFATE)/BI,AB
L4 0 S
(CETYLTRIMETHYLAMMINIUM(W)HYDROSULPHATE)/BI,AB
L5 0 S
(CETYLTRIMETHYLAMMONIUM(W)HYDROSULPHATE)/BI,AB
L6 1188 S
(TETRADECYLTRIMETHYLAMMONIUM(W)BROMIDE)/BI,AB
L7 0 S
(OCTADECYTRIMETHYLAMMONIUM(W)BROMIDE)/BI,AB

=> s (ctab or ctac or ctas or ttab or otab)/bi,ab 6485
CTAB/BI 4998 CTAB/AB 565 CTAC/BI
399 CTAC/AB 129 CTAS/BI 127
CTAS/AB 371 TTAB/BI 289 TTAB/AB
29 OTAB/BI 24 OTAB/AB
L8 7325 (CTAB OR CTAC OR CTAS OR TTAB OR
OTAB)/BI,AB

=> s l1 or l2 or l3 or l4 or l5 or l6 or l7 or l8
L9 15460 L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8

=> s l9 and hybridi?/bi,ab 158862 HYBRIDI?/BI
136895 HYBRIDI?/AB
L10 64 L9 AND HYBRIDI?/BI,AB

=> s l10 not 2005/py 205954 2005/PY
L11 63 L10 NOT 2005/PY

=> s l11 not 2004/py 1174260 2004/PY
L12 61 L11 NOT 2004/PY

=> s l12 not 2003/py 1224374 2003/PY
L13 53 L12 NOT 2003/PY

=> d l13 not 2002/py
'2002' MUST END IN '/Q', '/A', '/L', '/S' OR '/B'
The saved name for a query (or structure or screen set) must end with
'/Q'. The saved name for an answer set must end with '/A'. The saved
name for an L# list must end with '/L'. SDI request names must end
with '/S'. To see a list of all saved query, answer set,, and L# list
names for this loginid, enter "DISPLAY SAVED" at an arrow
prompt (=>). Enter "DISPLAY SAVED/S" to see a list of SDI request
names. Enter "DISPLAY SAVED/B" to see a list of BATCH search
requests.

=> s l13 not 2002/py 1160586 2002/PY
L14 49 L13 NOT 2002/PY

=> d his
(FILE 'HOME' ENTERED AT 13:51:29 ON 14 MAR 2005)
FILE 'CAPLUS' ENTERED AT 13:51:52 ON 14 MAR 2005
L1 8328 S
(CETYLTRIMETHYLAMMONIUM(W)BROMIDE)/BI,AB
L2 1898 S
(CETYLTRIMETHYLAMMONIUM(W)CHLORIDE)/BI,AB
L3 2 S
(CETYLTRIMETHYLAMMONIUM(W)HYDROSULFATE)/BI,AB
L4 0 S
(CETYLTRIMETHYLAMMINIUM(W)HYDROSULPHATE)/BI,AB
L5 0 S
(CETYLTRIMETHYLAMMONIUM(W)HYDROSULPHATE)/BI,AB
L6 1188 S
(TETRADECYLTRIMETHYLAMMONIUM(W)BROMIDE)/BI,AB
L7 0 S
(OCTADECYTRIMETHYLAMMONIUM(W)BROMIDE)/BI,AB
L8 7325 S (CTAB OR CTAC OR CTAS OR TTAB OR
OTAB)/BI,AB
L9 15460 S L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR
L8
L10 64 S L9 AND HYBRIDI?/BI,AB
L11 63 S L10 NOT 2005/PY
L12 61 S L11 NOT 2004/PY
L13 53 S L12 NOT 2003/PY
L14 49 S L13 NOT 2002/PY

=> d l14 1-49 bib ab

L14 ANSWER 1 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:350567 CAPLUS
DN 138:126846
TI Comb-type cationic copolymer expedites DNA strand exchange while stabilizing DNA duplex
AU Kim, W. J.; Ishihara, T.; Akaike, T.; Maruyama, A.
CS Department of Biomolecular Engineering, Tokyo Institute of Technology, Yokohama, 226-8501, Japan
SO Proceedings - 28th International Symposium on Controlled Release of Bioactive Materials and 4th Consumer & Diversified Products Conference, San Diego, CA, United States, June 23-27, 2001 (2001), Volume 2, 1189-1190 Publisher: Controlled Release Society, Minneapolis, Minn. CODEN: 69CNY8
DT Conference
LA English

AB The accelerating effect of cationic substances on DNA strand exchange reaction between 20 bp DNA duplex and its complementary single strand was studied. A polycationic comb-type copolymer, that consists of a poly (L-lysine) backbone and a dextran graft chain (PLL-g-Dex) and known to stabilize triplex DNA, expedites the strand exchange reaction under physiol. relevant conditions. Electrostatically a small excess of the copolymer let to a 300-1500-fold increase while large excess of spermine or cethyltrimethylammonium bromide, a cationic detergent known to promote markedly ***hybridization*** of complementary DNA strands, shows only a slight effect.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:57807 CAPLUS
DN 134:277010
TI Comb-type cationic copolymer expedites DNA strand exchange while stabilizing DNA duplex
AU Kim, Won Jong; Ishihara, Tsutomu; Akaike, Toshihiro; Maruyama, Atsushi
CS Department of Biomolecular Engineering Faculty of Bioscience and Biotechnology, Tokyo Institute of Technology, Yokohama, 226-8501, Japan
SO Chemistry--A European Journal (2001), 7(1), 176-180 CODEN: CEUJED; ISSN: 0947-6539
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB The accelerating effect of cationic substances on the DNA strand exchange reaction between a 20 bp DNA duplex and its complementary single strand was studied. A polycationic comb-type copolymer, that consists of a poly(L-lysine) backbone and a dextran graft chain (.alpha.PLL-g-Dex) and known to stabilize triplex DNA, expedites the strand exchange reaction under physiol. relevant conditions. Electrostatically a small excess of the copolymer lead to a 300-1500-fold increase in the DNA strand exchange while large excess of spermine or ***cetyltrimethylammonium*** ***bromide*** , a cationic detergent known to markedly promote ***hybridization*** of complementary DNA strands, shows only a slight effect. The efficacy of the copolymer was not affected by a 10 mM Mg2+ concn. Notably the copolymer promotes the strand exchange reaction while it stabilizes double-stranded DNA. Copolymer stabilization of strand exchange intermediates consisting of the parent duplex DNA and single strand DNA is believed to be responsible for the obsd. acceleration behavior.
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2000:257192 CAPLUS
DN 133:38820
TI High resolution detection of rRNA and rDNA in plant nucleoli with different activities by in situ ***hybridization***
AU Bassy, Olga; Jimenez-Garcia, Luis Felipe; Echeverria, Olga M.; Vazquez-Nin, Gerardo H.; De la Espina, Susana Moreno Diaz
CS Laboratorio Matriz Nuclear, Dpto. Biologia Vegetal, Centro Investigaciones Biologicas, Laboratorio Matriz Nuclear, Dpto. Biologia Vegetal, Centro Investigaciones Biologicas, C.S.I.C. Velazquez, Madrid, 28006, Spain
SO Biology of the Cell (2000), 92(1), 59-70 CODEN: BCELDF; ISSN: 0248-4900
PB Editions Scientifiques et Medicales Elsevier
DT Journal
LA English
AB In the present work we perform in situ ***hybridization*** with probes to different stretches of rDNA and electron microscopy of nucleoli with different activities, to gain insight into the ultrastructural organization of transcription and processing in the plant nucleolus. The main ultrastructural nucleolar components: fibrillar centers (FC), dense fibrillar component (DFC), and granular component (GC), are arranged in different ways depending on nucleolar activity. Heterogeneous FCs contg. RNP fibrils and nucleolar perichromatin granules are frequently seen in nucleoli in the process of activation. DNA-RNA in situ ***hybridization*** with biotinylated probes spanning different sequences of the rDNA unit followed by immunogold detection of biotin, demonstrated the localization of the ribosomal transcripts in DFC, mainly in the zones around the FCs, in GC, and in the periphery of pale FC. The internal region of the heterogeneous FCs is labeled only in cells in the process of activation of transcription after dormancy. The distribution of the U3 probe indicates that the processing of the rRNA takes place in the DFC and inside the heterogeneous FCs, in which transcription occurs. DNA-DNA ***hybridization*** demonstrates the presence of rDNA in the compact and extended chromatin located in the interior and at the periphery of FCs and in nucleolar assocd. chromatin. Our results support the view that the plant nucleolus has a highly dynamic morphol. and functional organization composed of a bipartite domain formed by FCs surrounded by DFC, which is assocd. with rRNA transcription and processing, and the GC representing a store of preribosomal particles.
RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:493704 CAPLUS
DN 131:267652
TI Application of genomic in situ ***hybridization*** to the chromosome complement of the intergeneric hybrid between Leucanthemella linearis (Matsum.) tzuvelev and Nipponanthemum nipponicum (Franch. et Maxim.) Kitamura
AU Ogura, Hisakazu; Kondo, Katsuhiko
CS Laboratory of Plant Chromosome and Gene Stock, Faculty of Science, Hiroshima University, Higashi-Hiroshima, 739-8526, Japan
SO Chromosome Science (1998), 2(2), 91-93 CODEN: CHSCF4
PB Society of Chromosome Research
DT Journal
LA English
AB Leucanthemella linearis (2n=18) and Nipponanthemum nipponicum (2n=18) were readily crossed by hand pollination. Root tips of their F1 hybrid were harvested, pretreated and fixed by the conventional technique before they were macerated with an enzymic soln. of 2% cellulase Onozuka RS, 1% pectolyase Y-23, 75 mM KCl and 7.5 mM EDTA at pH 4.0 for 30 min at 37.degree.C. They were squashed with 45% acetic acid. Total genomic DNA was extd. from fresh leaves of L. linearis and N. nipponicum sep. by the improved ***CTAB*** method. These DNA probes were labeled with biotin-14-dATP by the nick translation method. Combined denaturation of the genomic DNA probes and the slide prepn. were conducted by an automatic temp. controller at 85.degree.C for 10 min and they were ***hybridized*** at 37.degree.C for 12-14 h. By genomic in situ ***hybridization*** , total genomic DNA probe of N. nipponicum was ***hybridized*** to nine small chromosomes of N. nipponicum yellow-FITC-fluoresced in the chromosome set at mitotic metaphase in the F1 hybrid but not to the other nine

large chromosomes of L. linearis and these were counterstained red by propidium iodide.
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:367877 CAPLUS
DN 131:180351
TI Comparative analysis of different DNA extraction protocols: a fast, universal maxi-preparation of high quality plant DNA for genetic evaluation and phylogenetic studies
AU Csaikl, U. M.; Bastian, H.; Brettschneider, R.; Gauch, S.; Meir, A.; Schauerte, M.; Scholz, F.; Sperisen, C.; Vornam, B.; Ziegenhagen, B.
CS Biotechnology Unit, Austrian Research Centre Seibersdorf, Seibersdorf, A-2444, Austria
SO Plant Molecular Biology Reporter (1998), 16(1), 69-86
CODEN: PMBRD4; ISSN: 0735-9640
PB Kluwer Academic Publishers
DT Journal
LA English
AB Four DNA extn. protocols were compared for ability to produce DNA from the leaves or needles of several species: oak, elm, pine, fir, poplar and maize (fresh materials) and rhododendron (silica dried or frozen material). With the exception of maize and poplar, the species are known to be difficult for DNA extn. Two protocols represented classical procedures for lysis and purifn., and the other two were a combination of classical lysis followed by anion exchange chromatog. The DNA obtained from all procedures was quantified and tested by PCR and Southern ***hybridization*** . Test results indicated superiority of one of the four protocols; a combination of ***CTAB*** lysis followed by anion exchange chromatog. which enabled DNA extn. from all seven species. A second protocol also produced DNA from leaves or needles of all species investigated and was well suited for PCR applications but not Southern ***hybridizations*** . The remaining protocols produced DNA from some but not all species tested.
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:213228 CAPLUS
DN 131:68994
TI Genome organization is not conserved between Bacillus cereus and Bacillus subtilis
AU Okstad, Ole A.; Hegna, Ida; Lindback, Toril; Rishovd, Anne-Lise; Kolsto, Anne-Brit
CS Biotechnology Centre of Oslo and School of Pharmacy, University of Oslo, Oslo, 0316, Norway
SO Microbiology (Reading, United Kingdom) (1999), 145(3), 621-631 CODEN: MROBEO; ISSN: 1350-0872
PB Society for General Microbiology
DT Journal
LA English
AB The opportunistic pathogen Bacillus cereus is the genetically stable member of a group of closely related bacteria including the insect pathogen Bacillus thuringiensis and the mammalian pathogen Bacillus anthracis. Phys. maps of B. cereus and B. thuringiensis strains show considerable variations in discrete parts of the chromosome, suggesting that certain genome regions are more prone to rearrangements. B. cereus belongs to the same subgroup of Bacillus species as Bacillus subtilis, by both phenotypic and rRNA sequence classification. The anal. of 80 kb of genome sequence sampled from different regions of the B. cereus ATCC 10987 chromosome is reported. Anal. of the sequence and comparison of the localization of the putative genes with that of B. subtilis orthologs show the following: (1) gene organization is not conserved between B. cereus and B. subtilis; (2) several putative genes are more closely related to genes from other bacteria and archaea than to B. subtilis, or may be absent in B. subtilis 168; (3) B. cereus contains a 155 bp repetitive sequence that is not present in B. subtilis. By ***hybridization*** , this repeat is present in all B. cereus and B. thuringiensis strains so far investigated.
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:187033 CAPLUS
DN 131:68699
TI An improved procedure for extracting nucleic acids from citrus tissues for diagnosis of citrus viroids
AU Nakahara, Kenji; Hataya, Tatsuji; Uyeda, Ichiro; Ieki, Hiroyuki
CS Department of Agrobiology and Bioresources, Faculty of Agriculture, Hokkaido University, Sapporo, 060-8589, Japan
SO Nippon Shokubutsu Byori Gakkaiho (1998), 64(6), 532-538
CODEN: NSBGAM; ISSN: 0031-9473
PB Nippon Shokubutsu Byori Gakkai
DT Journal
LA English
AB When detecting viroids in citrus tissues, contaminating polysaccharides and phenolic compds. often make it difficult to consistently ext. nucleic acids. To ext. the nucleic acids consistently, the method was improved as follows: the contaminants were removed by differential 2-butoxyethanol pptn. instead of a combination of 2-methoxyethanol extn. and ***cetyltrimethylammonium*** ***bromide*** pptn. In contrast to the conventional method, the modified one consistently extd. some citrus viroids, i.e., citrus exocortis viroid (CEVd), group I citrus viroid (CVd-I) and hop stunt viroid-citrus isolate, which is a variant of group II citrus viroid (CVd-II), after they were sufficiently subjected to sequential PAGE (sPAGE) and dot blot ***hybridization*** using digoxigenin (DIG)-labeled cRNA probes. A viroid-like RNA presumed to be a group III citrus viroid (CVd-III) was detected in nucleic acids extd. from Japanese citrus samples by sPAGE. The cDNA fragments of the viroid-like RNA were cloned and sequenced. The nucleotide sequences of the cDNAs were completely identical to those reported previously for CVd-IIIa and CVd-IIIb abroad. CVd-III was detected from several other Japanese citrus samples using the DIG-labeled cRNA probe prepd. from the cloned cDNA. Many of these samples were also co-infected with other citrus viroids.
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:803753 CAPLUS
DN 130:167318
TI Recovery of total microbial RNA from lactic acid fermented foods with a high starch content
AU Ampe, F.; Ben Omar, N.; Guyot, J.-P.
CS Laboratoire de Biotechnologie Microbienne Tropicale, Institut Francais de Recherche pour le Developpement en Cooperation, Montpellier, Fr.
SO Letters in Applied Microbiology (1998), 27(5), 270-274
CODEN: LAMIE7; ISSN: 0266-8254

PB Blackwell Science Ltd.
DT Journal
LA English
AB An optimized procedure for the recovery of RNA from microorganisms involved in the fermn. of starchy foods (mainly hard-to-lyse lactic acid bacteria) is reported. Crit. steps for the extn. were: cell recovery by differential centrifugation; cell wall digestion with both mutanolysin and lysozyme; and ***CTAB*** treatment for the elimination of starch. Digestion of starch with .alpha.-amylase did not improve extn. yields. The method yielded high amts. of RNA from pozol, a Mexican maize-based fermented food, and was found to ext. total RNA efficiently from all the microorganisms potentially present in these ecosystems. Both rRNA and mRNA recovered were of high quality and suitable for ***hybridization*** studies.
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 9 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:733771 CAPLUS
DN 130:78431
TI Simple and efficient protocol for isolation of high molecular weight DNA from Streptomyces aureofaciens
AU Tripathi, G.; Rawal, S. K.
CS Plant Tissue Culture Division, National Chemical Laboratory, Pune, 411 008, India
SO Biotechnology Techniques (1998), 12(8), 629-631 CODEN: BTECE6; ISSN: 0951-208X
PB Chapman & Hall
DT Journal
LA English
AB A simple and efficient protocol involving the use of ***cetyltrimethylammonium*** ***bromide*** (***CTAB***) for rapid isolation of high mol. wt. (.gtoreq. 50 kb) DNA from Streptomyces aureofaciens is described. The DNA yields range from 1.5-2.5 mg per 1.0 g (wet wt.) of mycelia, with the purity measured at A260/280 of 1.83-1.97 and also at A260/230 of 2.2-2.71. The DNA prepn. is suitable as substrate for restriction digestion, Southern ***hybridization*** and library construction.
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 10 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:641013 CAPLUS
DN 130:25257
TI Tailored Hydrophobic Cavities in Oligonucleotide-Steroid Conjugates
AU Letsinger, Robert L.; Chaturvedi, Surendrakumar
CS Department of Chemistry and Department of Biochemistry, Molecular Biology, and Cell Biology, Northwestern University, Evanston, IL, 60208, USA
SO Bioconjugate Chemistry (1998), 9(6), 826-830 CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
AB Hydrophobic pockets can be generated readily in aq. soln. by ***hybridization*** of oligonucleotide conjugates contg. one or two androstane units inserted into each strand by short phosphoryl linkers. Both double- and triple-stranded complexes formed by the conjugates are stabilized by adding to the soln. a water-sol. hydrophobic substrate, 3,17-diamino-androstane dihydrochloride, that can bind in the pocket. This substrate has no effect on the dissocn. of unmodified oligonucleotides, and 1,10-diamino-decane dihydrochloride has no effect on dissocn. of complexes of these steroid conjugates under the same conditions. This system provides a new means for selectively modulating and triggering ***hybridization*** of oligonucleotide conjugates. ***Cetyltrimethylammonium*** ***bromide*** strongly enhances the stability of complexes of the steroid conjugates; however, it also leads to pptn. of complexes of unmodified oligonucleotides.
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 11 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:595289 CAPLUS
DN 129:311353
TI The isolation of genomic DNA from black currant (Ribes nigrum L.)
AU Woodhead, Mary; Davies, Howard V.; Brennan, Rex M.; Taylor, Mark A.
CS Dep. Cellular and Environmental Physiology, Scottish Crop Research Institute, Scotland, DD2 5DA, UK
SO Molecular Biotechnology (1998), 9(3), 243-246 CODEN: MLBOEO; ISSN: 1073-6085
PB Humana Press Inc.
DT Journal
LA English
AB A method is described for isolating DNA of high mol. mass (Mr) from black currant and other soft-fruit species. Following a hexadecyltrimethyl ammonium bromide (***CTAB***)-based extn. procedure, samples are treated with a glycosidic hydrolase mixt. and RNase, and then purified. The suitability of this DNA for Southern anal. and genomic-library construction is demonstrated.
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 12 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:408514 CAPLUS
DN 129:186250
TI Optimization of PCR for the diagnosis of toxoplasmosis
AU Lee, Doo-Yong; Lee, Young-Ha; Kang, Moon-Soo; Na, Young-Eun; Shin, Dae-Hwan
CS Department of Parasitology, College of Medicine, Chungnam National University, S. Korea
SO Chungnam Uidae Chapchi (1997), 24(1), 21-41 CODEN: CUCHDS; ISSN: 0253-6307
PB Chungnam National University, College of Medicine
DT Journal
LA Korean
AB To optimize the PCR for the diagnosis of toxoplasmosis, different DNA extn. method, PCR condition to conform the target DNA and Southern blot ***hybridization*** were carried out. The results were as follows. (1). On DNA extn., G NOME DNA isolation kit method from the tachyzoites of Toxoplasma RH strain and split second DNA isolation kit method from the blood of Toxoplasma injected mouse were most effective on yield and purity of DNA products than any other methods. (2). PCR products were relatively dependent upon the variation of MgCl2 concn. and pH in PCR buffer. (3). As the PCR results after serial diln., G NOME DNA isolation method from tachyzoites showed the sensitivity to 0.05 fg and the split second DNA isolation kit method showed to 5 pg. In the result, the sensitivity of PCR was increased to 10-1000 times after adding ***CTAB*** in these two methods. (4). In two steps PCR, denaturation and annealing, after adding ***CTAB*** , G NOME DNA isolation

kit method showed sensitivity to 5 pg and split second DNA isolation kit method to 5 ng at the annealing of 72.degree. and the former showed the sensitivity to 50 fg and the latter showed the same sensitivity with it at 72.degree., at the annealing of 65.degree.. (5). As the result of comparison to the sensitivity of target DNA with sequential amplification method and Southern blot ***hybridization*** , the one was 100-1000 times more sensitive than that of the other.

L14 ANSWER 13 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:329660 CAPLUS
DN 129:118405
TI Detection of phormium yellow leaf phytoplasma in New Zealand flax (Phormium tenax) using nested PCRs
AU Andersen, M. T.; Beever, R. E.; Gilman, A. C.; Liefting, L. W.; Balmori, E.; Beck, D. L.; Sutherland, P. W.; Bryan, G. T.; Gardner, R. C.; Forster, R. L. S.
CS HortResearch, Auckland, N. Z.
SO Plant Pathology (1998), 47(2), 188-196 CODEN: PLPAAD; ISSN: 0032-0862
PB Blackwell Science Ltd.
DT Journal
LA English
AB A reliable diagnostic method was developed for use in studying the relationship between phormium yellow leaf disease of New Zealand flax (Phormium tenax) and its assocd. phytoplasma (phormium yellow leaf phytoplasma: PYL). Diagnosis involved a nested PCR (polymerase chain reaction) technique targeting the 16S rRNA gene. DNA was extd. from woody rhizome tissues of NZ flax plants using ***CTAB*** and a high salt pptn. step. This method effectively eliminated polysaccharides, gum-like material and other compds. inhibitory to PCRs that occur at high concns. in diseased NZ flax rhizomes. PCR competence of each DNA prepn. from both healthy and yellow leaf diseased plants was assessed using the general prokaryotic 16S rRNA gene primers, Gd1/Berg54. These primers amplified DNA from both diseased and healthy plants. PYL 16S rDNA sequences were not detected consistently following amplification by PCR (35 cycles) using the "universal" phytoplasma-specific primer pairs R16F2/R16R2 or P1/P6. By contrast, PYL was consistently detected in diseased, but not healthy, NZ flax plants, following nested PCR of the products of the above three primer pairs. Nested PCRs involve the primers NGF/NGR, which were designed to ***hybridize*** with all phytoplasmas for which published sequences were available. The most sensitive level of detection by nested PCR was achieved using primers R16F2/R16R2, rather than primers P1/P6 or Gd1/Berg54, for the primary amplification step. The consistent assocn. found in this study between yellow leaf disease and PYL further substantiates this phytoplasma as the causal agent. PCR products of the expected size were also amplified by nested PCR using the primers R16F2/R16R2 followed by NGF/NGR from C. roseus tissues infected with five other phytoplasmas representing three distinct phytoplasma groups. Therefore nested PCRs with these pairs of primers should be useful for detecting other phytoplasmas, in particular those occurring at low concns. or in recalcitrant tissues.
RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 14 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:23672 CAPLUS
DN 128:124180
TI Rapid and inexpensive method for isolating plasmid DNA
AU Aljanabi, Salah M.; Al-Awadi, Salwa J.; Al-Kazaz, Abdulkareem A.
CS Department of Biotechnology, College of Science, University of Baghdad, Baghdad, Iraq
SO Dirasat: Natural and Engineering Sciences (1997), 24(2), 400-403 CODEN: DNESFZ; ISSN: 1026-3756
PB University of Jordan, Deanship of Research
DT Journal
LA English
AB A small-scale and economical method for isolating plasmid DNA from bacteria is described. The method provides DNA of suitable quality for most DNA manipulation techniques. This DNA can be used for restriction endonuclease digestion, southern blot ***hybridization*** , nick translation and end labeling of DNA probes, Polymerase Chain Reaction (PCR) -based techniques, transformation, DNA cycle-sequencing, and Chain-termination method for DNA sequencing. The entire procedure is adapted to 1.5 mL microfuge tubes and takes approx. 30 min. The DNA isolated by this method has the same purity produced by ***CTAB*** and cesium chloride pptn. and purifn. procedures resp. The two previous methods require many hours to obtain the final product and require the use of very expensive equipment as ultracentrifuge. This method is well suited for the isolation of plasmid DNA from a large no. of bacterial samples and in a very short time and low cost in labs. where chems., expensive equipment, and finance are limited factors in conducting mol. research.
RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 15 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:757153 CAPLUS
DN 128:44651
TI ***Hybridization*** buffers and media improving the signal-to-noise ratio for assays on oligonucleotide arrays
IN Cronin, Maureen T.; Miyada, Charles Garrett; Trulson, Mark; Gingeras, Thomas R.; Mcgall, Glenn; Robinson, Claire; Oval, Michelle
PA Affymetrix, Inc., USA; Cronin, Maureen T.; Miyada, Charles Garrett; Trulson, Mark; Gingeras, Thomas R.; Mcgall, Glenn; Robinson, Claire; Oval, Michelle
SO PCT Int. Appl., 25 pp. CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 16 PATENT NO. KIND DATE APPLICATION NO. DATE ---------- ---- -------- ---------- --------
PI WO 9743450 A1 19971120 WO 1997-US8446 19970516 W: AU, CA, JP, US RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE US 6045996 A 20000404 US 1996-648709 19960516 AU 9730090 A1 19971205 AU 1997-30090 19970516
PRAI US 1996-648709 A 19960516 US 1993-143312 B2 19931026 US 1994-284064 B2 19940802 WO 1994-US12305 A2 19941026 US 1995-510521 A2 19950802 US 1995-544381 A2 19951010 WO 1997-US8446 W 19970516
AB Methods of improving the signal-to-noise ratio in nucleic acid ***hybridization*** assays on high-d. (>10,000 oligonucleotides/cm2) substrate-bound oligonucleotide arrays, such as the Affymetrix DNA Chip, using ***hybridization*** media that include an isostabilizing agent, a denaturing agent or a renaturation accelerant are described. Media for use with fluorescein-labeled probes are described.

L14 ANSWER 16 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:660957 CAPLUS
DN 127:315871
TI The association of complementary ribonucleic acids can be strongly increased without lowering Arrhenius activation energies or significantly altering structures
AU Nedbal, Wolfgang; Homann, Matthias; Sczakiel, Georg
CS Forschungsschwerpunkt Angewandte Tumorvirologie, Deutsches Krebsforschungszentrum, Heidelberg, D-69120, Germany
SO Biochemistry (1997), 36(44), 13552-13557 CODEN: BICHAW; ISSN: 0006-2960
PB American Chemical Society
DT Journal
LA English
AB The assocn. rates of complementary nucleic acids can be increased by 2-3 orders of magnitude in vitro by cellular proteins and low mol. wt. compds. including ***cetyltrimethylammonium*** ***bromide*** (***CTAB***). In this work, we provide exptl. evidence that the ***CTAB*** -mediated enhancement of RNA-RNA annealing by approx. 3 orders of magnitude is due to a favorable activation entropy (.DELTA.S.thermod.) and not due to a decrease of the Arrhenius activation energy (Ea) nor to major structural changes of the RNA. Two alternative models for the ***CTAB*** -facilitated RNA-RNA annealing will be discussed. First, ***CTAB*** could form a pos. charged liq. matrix which could steer complementary RNA mols. and thereby increase their collision frequency and annealing rate. Second, increased annealing rates could be explained by stabilization of a non-base-specific precomplex of both complementary RNA mols. in soln.
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 17 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:92335 CAPLUS
DN 126:140285
TI A polymerase chain reaction assay for the detection of Leptospira spp. in bovine semen
AU Masri, Saad A.; Nguyen, Phuong T.; Gale, S. Pamela; Howard, Chris J.; Jung, Suk-Chan
CS Animal Diseases Research Institute, Agriculture and Agri-Food Canada, Lethbridge, AB, T1J 3Z4, Can.
SO Canadian Journal of Veterinary Research (1997), 61(1), 15-20 CODEN: CJVRE9; ISSN: 0830-9000
PB Veterinary Medical Association
DT Journal
LA English
AB A rapid and specific method for the detection of pathogenic Leptospira spp. in bovine semen using the polymerase chain reaction (PCR) is described. The primers used were derived from an EcoR1/BamH1 fragment that ***hybridized*** strongly to chromosomal DNA from the hardjobovis serovar. Three different extn. methods were evaluated in this study: phenol-chloroform extn. method, proteinase K (PK) in 1% SDS, followed by phenol-chloroform, and phenol-chloroform followed by 1% ***cetyltrimethylammonium*** ***bromide*** (***CTAB***). A PCR product of approx. 500 base pairs (bp) in length was obtained when DNA from pure Leptospira culture was used as a template for PCR, regardless of the DNA extn. method used. The product was consistent with that predicted from the gene sequence. However, in semen seeded in vitro, as well as in semen from infected bulls, a PCR product was obtained only when the leptospiral DNA was extd. from the specimen using the ***CTAB*** method. In contrast, other methods used for DNA extn. did not generate suitable templates for the PCR procedure. This is the first PCR protocol developed to detect Leptospira in bovine semen. The PCR protocol provided a direct and unequivocal demonstration that Leptospira can be detected in semen of infected animals. The ***CTAB*** method was also used successfully in detecting Leptospira in the urine of infected animals. The PCR procedure was shown to be more sensitive than either the fluorescent antibody test (FAT) or culture for detecting the organism in urine.
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 18 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:349849 CAPLUS
DN 125:41765
TI Adsorption of antisense oligonucleotides onto nanoparticles for therapeutic use.
IN Helene, Claude; Saison, Behmoaras Ester
PA Centre National De La Recherche Scientifique Cnrs, Fr.
SO Fr. Demande, 23 pp. CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE ---------- ---- -------- ---------- -------
PI FR 2724935 A1 19960329 FR 1994-11512 19940927
FR 2724935 B1 19961220
PRAI FR 1994-11512 19940927
AB Methods for adsorption or encapsulation of antisense oligonucleotides onto nanoparticles for use in the treatment of tumors or other diseases assocd. with disruption of patterns of regulation of gene expression are described. Adsorption onto nanoparticles increases the resistance of the oligonucleotides to nucleases and improved cellular uptake and ***hybridization*** to the target sequence. Specifically, antisense oligonucleotides directed against mutants of the ras oncogene are described. Adsorbed or immobilized oligonucleotides are up to 100-fold more effective than the free oligonucleotide. The nanoparticles have a diam. of 50-500 nm and include a hydrophobic cationic polymer for efficient binding of the oligonucleotides. Nude mice inoculated with HBL100ras cells showed strong inhibition of tumor growth when treated with nanoparticles contg. the appropriate antisense DNA.

L14 ANSWER 19 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:704482 CAPLUS
DN 123:161982
TI A rapid one-tube genomic DNA extraction process for PCR and RAPD analyses
AU Steiner, J. J.; Poklemba, C. J.; Fjellstrom, R. G.; Elliott, L. F.
CS Natl. Forage Seed Production Res. Cent., USDA-ARS, Corvallis, OR, 97331, USA
SO Nucleic Acids Research (1995), 23(13), 2569-70 CODEN: NARHAD; ISSN: 0305-1048
PB Oxford University Press
DT Journal
LA English
AB Our rapid extn. process consists of two parts: sample prepn. for extn. and a one-step DNA chem. extn. To prep. samples for DNA extn., fresh plant leaves (~3 cm2) are collected into 1.1 ml tubes contg. five 3.0 mm diam. glass beads that are held in microtiter format racks. Th tube racks with samples are lyophilized until the leaf samples are dry, resulting in ~5 mg of dry leaf material per tube. The tubes are then capped and the samples ground by shaking the tube racks for 20 min on a wrist-

action shaker (Labline Instruments, Melros Park, USA). To conduct the DNA extn., 200 .mu.l of rapid one-step extn. (ROSE) buffer contg. 10 mM Tris-HCl, pH 8.0; 312.5 mM EDTA, pH 8.0; 1% sodium lauryl sarkosyl and 1% polyvinylpolypyrrolidone (PVPP, water insol.) is added to the ground lyophilized tissue. The tubes and contents are vortexed thoroughly and then incubated in a ***hybridization*** oven at 900C for 20 min and mixed constantly by attaching the tube racks to the oven rotor. Alternatively the tubes can be set in 900C water bath and frequently inverted. The samples are placeed on ice for 5 min to allow the tissue and PVPP to settle before aliquots of ext. are taken for diln. and amplification by PCR. The original tube with sample and extractant, or dilns. of the extractant, can be stored for months at 40C. For amplification of ROSE-extd. DNA by PCR, 10 .mu.l of the original ext. is dild. 170-fold with 1690 .mu.l of water and then 2.3 .mu.l of dild. ext. is used in a 12.5 .mu.l reaction mixt. We have routinely recovered 0.5-5.0 .mu.g of DNA using ***CTAB*** and 0.8-1.2 .mu.g using ROSE from 5.0 mg of lyophilized leaf tissue of Lottus corniculatus.

L14 ANSWER 20 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:694177 CAPLUS
DN 123:161973
TI Quantitation of Pseudomonas sp. strain B13(FR1) in the marine environment by competitive polymerase chain reaction
AU Leser, Thomas D.
CS Department Marine Ecology and Microbiology, National Environmental Research Institute, Roskilde, DK-4000, Den.
SO Journal of Microbiological Methods (1995), 22(3), 249-62
CODEN: JMIMDQ; ISSN: 0167-7012
PB Elsevier
DT Journal
LA English
AB A method of competitive PCR (cPCR) was developed for quantitation of Pseudomonas sp. strain B13(FR1) released into the marine environment. Following DNA extn. and purifn. with ***CTAB*** (hexadecyltrimethyl ammonium bromide) from seawater inoculated with Pseudomonas sp. strain B13(FR1), a 712-bp fragment (B13-fragment) was co-amplified with a 588-bp internal std. The internal std. had the same priming sequences as the B13-fragment and was added to calibration stds. and samples at a const. concn. The yield of the 2 cPCR products was measured on digitized images of Polaroid or x-ray films. The ratio of the 2 product yields from cPCR was used to make std. curves based on serially dild. DNA extd. from seawater inoculated with Pseudomonas sp. strain B13(FR1). When cPCR products were detected on ethidium bromide- stained gels, the ratio of the 2 fragments was log-linear from 400 cells per cPCR to 4 .times. 105 cells per cPCR. The log-linear range was extended to 4 cells per cPCR by ***hybridizing*** Southern blots with a chemiluminescent probe. With the described method Pseudomonas sp. strain B13(FR1) was quantitated in seawater samples inoculated with 0.1 cells/mL to 104 cells/mL.

L14 ANSWER 21 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:659755 CAPLUS
DN 123:104337
TI Methods for identifying a genus, a species or a variety of a fruit by analysis of genetic polymorphisms
IN Lindsey, Keith; Twell, David
PA Minister of Agriculture, Fisheries and Food, UK
SO Fr. Demande, 20 pp. CODEN: FRXXBL
DT Patent
LA French
FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE
PI FR 2711143 A1 19950421 FR 1994-12235 19941013
FR 2711143 B1 19960531
PRAI GB 1993-21113 A 19931013
AB Methods for identifying the origin of a fruit prepn. by anal. of the DNA present in the sample are described. The method is particularly intended for use in the anal. of fruit products such as juices, pulps or purees for food use to prevent fraud. Methods using amplification, such as RAPD, and ***hybridization*** (e.g. RFLP) and suitable primers and probes are described. Methods for the efficient isolation of good quality DNA from fruit juices are also described.

L14 ANSWER 22 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:615352 CAPLUS
DN 123:5121
TI Dry elements, test devices, test kits and methods for chemiluminescent detection of analytes using peroxidase labeled reagents.
IN Emmons, Robert Edwin; Mauck, John Charles; Heaney, Paul James; Freund, Dietmar Karl; Latart, David Brewer; Chubet, Richard George; Vizard, Douglas Lincoln
PA Eastman Kodak Co., USA
SO Eur. Pat. Appl., 15 pp. CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE
PI EP 653637 A2 19950517 EP 1994-203281 19941110
EP 653637 A3 19960821 EP 653637 B1 20010530 R: AT, BE, CH, DE, DK, FR, GB, IT, LI, NL, SE
CA 2130947 AA 19950513 CA 1994-2130947 19940826
CA 2130947 C 20010206 JP 07194396 A2 19950801 JP 1994-277564 19941111
US 5641635 A 19970624 US 1996-589129 19960122
US 5736335 A 19980407 US 1997-783049 19970114
PRAI US 1993-153141 A 19931112 US 1996-589129 A1 19960122
AB A dry, removable anal. element can be used to detect chemiluminescent signals produced from the reaction of peroxidase and a chemiluminescent detection system. The anal. element contains at least two layers, the outer layer being non-tacky and water-sol. or water-permeable, and used to contact a gel plate or transblotting membrane in which multiple analytes are located. The resulting signal can be recorded using a photosensitive element. Test kits include the various packaged components needed to use the anal. element for analyte detection. Within the element are crit. amts. of oxidase and an oxidase substrate for highly sensitive analyte detection.

L14 ANSWER 23 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:274964 CAPLUS
DN 122:51668
TI Testing for infestation of rapeseed and other cruciferae by the fungus Leptosphaeria maculans by polymerase chain reaction
IN Taylor, Janet L.
PA National Research Council of Canada, Can.
SO PCT Int. Appl., 29 pp. CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE

PI WO 9421788 A2 19940929 WO 1994-CA130 19940314 WO 9421788 A3 19941222 W: US RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE CA 2092115 AA 19940923 CA 1993-2092115 19930322 CA 2092115 C 19981215 EP 689591 A1 19960103 EP 1994-908903 19940314 EP 689591 B1 19970806 R: GB US 5916744 A 19990629 US 1995-521053 19950829
PRAI CA 1993-2092115 A 19930322 WO 1994-CA130 W 19940314
AB A PCR method of testing for infestation of tissue of rape or other Cruciferae with a virulent strain of Leptosphaeria maculans is described. The methods uses primers derived from the repetitive element LMR1 of L. maculans (Genbank M77515) that is specific to virulent strains of the fungus to amplify fungal DNA in the sample and then detecting L. maculans DNA in the amplification products by ***hybridization*** . A method of extg. DNA of L. maculans from plant tissue for amplification is described. Fungal DNA was obtained from contaminated seed by incubating the seed in a fungal minimal medium overnight and recovering mycelium by filtration and centrifugation. Pelleted mycelium was lyophilized, treated with proteinase K and SDS and extd. with phenol, phenol/chloroform, and chloroform and pptd. with ***CTAB*** . Using primers derived from LMR1 the lower limit of detection of L. maculans DNA was 100 fg.

L14 ANSWER 24 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:17928 CAPLUS
DN 122:73424
TI searching for DNA introgressed from wheat and for wheat-like grain proteins in a rice .times. wheat ***hybridization*** derivative
AU Ahokas, Hannu
CS Dep. Genet., Univ. Helsinki, Helsinki, FIN-00014, Finland
SO Euphytica (1994), Volume Date 1993-1994, 72(3), 177-82
CODEN: EUPHAA; ISSN: 0014-2336
DT Journal
LA English
AB The DNA of a putative rice .times. wheat ***hybridization*** deriv. (X Oryticum oryzoides) from China, the DNA of its parental rice cultivar and the DNA of a wheat line were digested with ten different restriction endonucleases, resolved by agarose electrophoresis, Southern blotted and ***hybridized*** using genomic wheat DNA as a probe. Phenol extd., ethanol and ***cetyltrimethylammonium*** ***bromide*** pptd. DNA of the putative hybrid showed a restriction fragment length polymorphism (RFLP) different from that of the parental rice. When the DNA was further purified by Qiagen chromatog., the RFLP differences were not detected. Hence the apparent RFLP differences were probably due partial digestion of the less pure DNA prepns. by the restriction endonucleases. No real introgressed fragments from wheat genome could be shown. The HpaII/MspI sites were more frequently digested with MspI than with HpaII in rice and ***hybridization*** deriv. DNA, but the sites were evidently more frequently methylated in wheat DNA. Thus, in terms of methylation of the DNA, the ***hybridization*** deriv. was much more like the rice parent than the wheat parent. The ***hybridization*** deriv. showed a single endospermal protein (mass 19 kg mol-1) not detected in the parental rice cultivar. This minor protein was sol. in buffered 50% isopropanol and precipitable with methanol. The results indicate that there are no or only short introgressed sequences from wheat in the rice/wheat deriv., a result which might be considered in breeding efforts with the hybrid deriv.

L14 ANSWER 25 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:10631 CAPLUS
DN 122:27307
TI Multidrug resistance to antiseptics and disinfectants in coagulase-negative staphylococci
AU Leelaporn, Amornrut; Paulsen, I. T.; Tennent, Jan M.; Littlejohn, T. G.; Skurray, R. A.
CS Sch. Biol. Sci., Univ. Sydney, Sydney, 2006, Australia
SO Journal of Medical Microbiology (1994), 40(3), 214-20
CODEN: JMMIAV; ISSN: 0022-2615
DT Journal
LA English
AB The occurrence of resistance to antiseptics and disinfectants in clin. isolates of coagulase-neg. staphylococci (CNS) was examd. Of 164 clin. strains of CNS isolated in the early 1980s, 65 were resistant to cationic antimicrobial compds. such as ***cetyltrimethylammonium*** ***bromide*** . Further characterization of 40 resistant isolates by DNA-DNA ***hybridization*** anal. and phenotypic resistance studies revealed that this resistance was mediated by the multidrug export genes qacA and qacC, characterized previously in Staphylococcus aureus. Of the resistant CNS isolates, 50% contained only qacA, 10% contained only qacC, and the remaining 40% contained both qacA and qacC. Both qacA and qacC genes resided on plasmids in all cases, with qacA located on plasmids of > 10 kb, whereas qacC was located primarily on plasmids of 2-3 kb. Representative qacA and qacC plasmids were characterized by restriction endonuclease mapping, and were found to be similar in some cases, but different in others, to those plasmids on which these genes are found in S. aureus.

L14 ANSWER 26 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:239660 CAPLUS
DN 120:239660
TI Chemiluminescent composition containing cationic surfactants or polymers and 4'-hydroxyacetanilide, test kits and their use in analytical methods
IN Kissel, Thomas R.
PA Eastman Kodak Co., USA
SO U.S., 11 pp. CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE ---------- ---- -------- ---------- --------
PI US 5279940 A 19940118 US 1992-923662 19920803 EP 582339 A2 19940209 EP 1993-202214 19930727 EP 582339 A3 19950412 R: AT, BE, CH, DE, DK, FR, GB, IT, LI, LU, NL, SE AT 185899 E 19991115 AT 1993-202214 19930727 JP 06197796 A2 19940719 JP 1993-191001 19930802
PRAI US 1992-923662 A 19920803
OS MARPAT 120:239660
AB An aq. compn. useful for providing a chemiluminescent signal in anal. methods is stabilized by the presence of specific amts. of either a low-mol.-wt. cationic surfactant or a cationic polymer. The compn. also includes a 2,3-dihydro-1,4-phthalazinedione deriv., such as luminol, and 4'-hydroxyacetanilide, as a chemiluminescence enhancer. A chemiluminescent signal is generated using the compn. in the presence of peroxidase or a peroxidase-labeled specific binding species (such as an antibody or oligonucleotide). All of the cationic materials tested increased the chemiluminescent signal at all horseradish peroxidase enzyme levels when 4'-hydroxyacetanilide was used as an enhancer; signals decreased with nonionic and anionic surfactants in the presence of 4'-

hydroxyacetanilide and 4-iodophenol as enhancers. The sensitivity of a chemiluminescence immunoassay for TSH was improved by using ***cetyltrimethylammonium*** ***bromide*** and 4'-hydroxyacetanilide in the signal-generating reagent.

L14 ANSWER 27 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1994:237345 CAPLUS
DN 120:237345
TI The gene encoding cytochrome-c oxidase subunit I from Synechocystis PCC6803
AU Alge, Daniel; Schmetterer, Georg; Peschek, Guenter A.
CS Inst. Phys. Chem., Univ. Vienna, Vienna, A-1090, Austria
SO Gene (1994), 138(1-2), 127-32 CODEN: GENED6; ISSN: 0378-1119
DT Journal
LA English
AB The gene (cosI or CosA) encoding subunit I (COI) of cytochrome-c oxidase (cytochrome aa3) of Synechocystis PCC6803, Synechococcus PCC7942 (Anacystis nidulans R2) and Nostoc PCC8002 (Nostoc Mac), was identified by heterologous ***hybridization*** of chromosomal digests with a 17-bp oligodeoxyribonucleotide (probe C) derived from the coxI of Paracoccus denitrificans. A single genomic fragment was found to bind to probe C in all chromosomal digests. Due to its favorable signal-to-noise ratio, the genome of Synechocystis was chosen for the isolation and sequencing of this gene. A genomic DNA library in pUC18 was screened with probe C. The two probe C-pos. plasmids, pDAUV1 and pDAUV2, contained a 1-kb overlapping region, with the conserved 17-bp sequence encoding the CuB-binding region of the COI polypeptide. These plasmids were subcloned into competent Escherichia coli DH5.alpha. cells, and the nucleotide sequences were detd. The deduced amino acid (aa) sequences of Synechocystis COI and homologous proteins from a variety of prokaryotic and eukaryotic organisms showed an overall similarity of between 38.6 and 45.8%. Hydropathy plots revealed 12 potential transmembrane helixes. All of the six histidines needed for the binding of heme a and the heme a3/CuB bimetallic center are present in the expected positions of the Synechocystis COI protein (533 aa, Mr 59,390). A monospecific antibody raised against P. denitrificans COI gave an unequivocal immunol. cross-reaction on Western blots of membrane prepns. from Synechocystis, Anacystis and Nostoc, showing that the product of gene coxI is indeed synthesized and incorporated into cyanobacterial membranes.

L14 ANSWER 28 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:442497 CAPLUS
DN 119:42497
TI Characterization of a cta/CDE operon-like genomic region encoding subunits I-III of the cytochrome c oxidase of the cyanobacterium Synechocystis PCC 6803
AU Alge, Daniel; Peschek, Guenter A.
CS Inst. Phys. Chem., Univ. Vienna, Vienna, A-1090, Austria
SO Biochemistry and Molecular Biology International (1993), 29(3), 511-25 CODEN: BMBIES; ISSN: 1039-9712
DT Journal
LA English
AB Strong heterologous ***hybridization*** of a synthetic oligonucleotide probe of 17 bp originally used to clone subunit I of the Paracoccus denitrificans cytochrome c oxidase (M. Ratio, et al., 1987) to a single band was obsd. on Southern blots of Anacystis nidulans R2 (Synechococcus PCC 7942), Synechocystis PCC 6803, and Nostoc Mac PCC 8002 chromosomal DNA digests. Six pooled gene banks prepd. from Synechocystis PCC 6803 contained regions that ***hybridized*** to the oligonucleotide (probe C) which is specifically directed toward the putative Cu-binding site VWAHHMY of subunit I. Two of these gene banks were transformed into Escherichia coli and screened for colonies ***hybridizing*** to probe C. Several clones were recovered, and one type of plasmid was identified from each gene bank. The two (overlapping) plasmids were called pDAUV1 and pDAUV2. A restriction map of the plasmids showed that the overlapping region contained an 80 bp PvuI-KpnI fragment binding to probe C. The two clones together permitted sequencing of the entire gene for cytochrome c oxidase subunit I from Synechocystis PCC 6803. Further systematic sequencing of .apprx.1000 bp upstream and downstream each of the ctaD (subunit I) gene revealed the presence of two genes encoding subunits II (***ctaC*** gene) and III (ctaE gene) due to conspicuous similarities to homologous genes from other cytochrome c oxidase-contg. organisms. Yet, no indications of genes encoding addnl. subunits of the oxidase were found within the region sequenced.

L14 ANSWER 29 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:206176 CAPLUS
DN 118:206176
TI Differences in the ***hybridization*** pattern of Bacillus subtilis genes coding for rRNA depend on the method of DNA preparation
AU Waterhouse, Rosemary N.; Glover, L. Anne
CS Dep. Mol. Cell Biol., Univ. Aberdeen, Aberdeen, AB9 1AS, UK
SO Applied and Environmental Microbiology (1993), 59(3), 919-21 CODEN: AEMIDF; ISSN: 0099-2240
DT Journal
LA English
AB Three different methods of DNA isolation (org. deproteinization, potassium acetate deproteinization, and the use of ***cetyltrimethylammonium*** ***bromide***) were used to prep. DNA from B. subtilis. Subsequent ***hybridization*** with an rDNA probe (DNA coding for rRNA) produces different patterns, which mirror those previously reported to indicate an rDNA deletion.

L14 ANSWER 30 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:94465 CAPLUS
DN 118:94465
TI DNA probes as molecular markers to monitor the seasonal occurrence of walnut witches'-broom mycoplasmalike organism
AU Chen, J.; Chang, C. J.; Jarret, R. L.
CS Dep. Plant Pathol., Univ. Georgia, Griffin, GA, 30223-1797, USA
SO Plant Disease (1992), 76(11), 1116-19 CODEN: PLDIDE; ISSN: 0191-2917
DT Journal
LA English
AB A rapid and sensitive method was developed to monitor the occurrence of walnut witches'-broom (WWB) mycoplasmalike organism (MLO) in infected walnut (Juglans nigra) trees. Walnut leaf tissues from both asymptomatic and symptomatic trees collected monthly during the growing seasons of 1990 and 1991 and freeze-dried. Southern blots of ***CTAB*** -extd. DNA without endonuclease digestion were used for ***hybridization*** with 32P-labeled chromosomal and extrachromosomal WWB MLO DNA probes. The presence of WWB MLO DNA was detected in DNA exts. from a single tree at least 2 mo prior to the seasonal appearance of WWB symptoms when extrachromosomal DNA probes, but not chromosomal DNA probes, were used. Also, ***hybridization*** results and observation of symptom development indicate that WWB MLO may not be uniformly distributed within infected walnut trees.

Results from 2-dimensional electrophoresis expts. suggested that there were double-stranded, circular, extrachromosomal DNA mols., approx. 5 and 1.5 kb.

L14 ANSWER 31 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:646203 CAPLUS
DN 117:246203
TI Rapid isolation of high molecular weight DNA from marine macroalgae
AU Shivji, M. S.; Rogers, S. O.; Stanhope, M. J.
CS Sch. Fish., Univ. Washington, Seattle, WA, 98195, USA
SO Marine Ecology: Progress Series (1992), 84(2), 197-203 CODEN: MESEDT; ISSN: 0171-8630
DT Journal
LA English
AB Application of mol. techniques to study marine macroalgae is in its infancy, and is likely to be facilitated by the ability to routinely isolate high quality DNA from these plants. The generally high polysaccharide and polyphenol content in macroalgae, however, often interferes with the isolation and subsequent enzymic manipulation of their nucleic acids. The use of a ***CTAB*** method for the isolation of high mol. wt. DNA from marine macroalgae is described. The method is rapid, simple, inexpensive, does not require d. gradient ultracentrifugation, and has general applicability to red, brown, and green seaweeds. The isolated DNA appears sufficiently pure for application of most commonly used mol. techniques such as restriction endonuclease digestion, Southern blot ***hybridization*** , cloning, and amplification using the polymerase chain reaction. The method was also tested on the marine angiosperm Zostera marina (eelgrass).

L14 ANSWER 32 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:630035 CAPLUS
DN 117:230035
TI Detection of Norwalk virus in stool by polymerase chain reaction
AU Jiang, Xi; Wang, Jianxiang; Graham, David Y.; Estes, Mary K.
CS Div. Mol. Virol., Baylor Coll. Med., Houston, TX, 77030, USA
SO Journal of Clinical Microbiology (1992), 30(10), 2529-34 CODEN: JCMIDW; ISSN: 0095-1137
DT Journal
LA English
AB A method of reverse transcription (RT) and polymerase chain reaction (PCR) for the detection of Norwalk virus in human stools was developed. A cationic detergent, ***cetyltrimethylammonium*** ***bromide*** effectively removed factors that inhibit the RT-PCR assay from stool exts. . The specificities of the tests were shown by ***hybridization*** of the amplified DNA with Norwalk virus-specific cDNA probes and a consistent correlation between virus detection in stools and infection of volunteers. RT-PCR detected virus in stool samples dild. 10-4 and was .apprx.100-fold more sensitive than dot blot ***hybridization*** . In serial stool samples collected before and at different times after inoculation of 10 volunteers with Norwalk virus, 37 of 55 were pos. by RT-PCR, but only 27 were pos. by dot blot ***hybridization*** . Further application of this method should allow detection of Norwalk virus in food or environmental samples such as shellfish and shellfish waters.

L14 ANSWER 33 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:585816 CAPLUS
DN 117:185816
TI Cloning of hepadnaviruses using microquantity serum
AU Panda, S. K.; Munshi, Anupama; Ramesh, Rajagopal
CS Dep. Pathol., AIIMS, New Delhi, 110 0291, India
SO Nucleic Acids Research (1992), 20(16), 4373 CODEN: NARHAD; ISSN: 0305-1048
DT Journal
LA English
AB The most frequently encountered problems in cloning of Hepadnaviruses are the availability of large quantities of serum/plasma and the purifn. of the virus. A simple and efficient method for cloning of viral DNA from micro-quantities of serum is described which circumvents these problems. Virus pos. serum/plasma (100 .mu.L) was incubated with an equal vol. of specific polyclonal antibody and Protein A Sepharose (200 .mu.L) at 37.degree. for 2 h. The antigen-antibody-Protein A Sepharose complex was washed and centrifuged. The Sepharose beads were pelleted down and removed. The supernatant was treated with 1% ***cetyltrimethylammonium*** ***bromide*** (***CTAB***) and NaCl. The advantage of using ***CTAB*** is its ability to complex with polysaccharides, denatured proteins and cell debris leaving the nucleic acid in soln. clean for further use. This was followed by phenol/chloroform/isoamylalc. (25:24:1) extn. The supernatant was dild. with Tris EDTA pH 8.0 and pptd. with ethanol in presence of yeast tRNA. The pptd. nucleic acid was resuspended in T7 DNA polymerase buffer, 5 units of T7 DNA polymerase and incubated to fill the single stranded gap and create a homogenous population of double stranded DNA. The enzyme in the reaction mixt. was heat inactivated. The DNA was digested with a suitable restriction enzyme in the same buffer, heat inactivated and ligated to compatible ends of dephosphorylated bluescript vector (pBS+). The ligated mix was dild. and used for transformation of JM109 cells using polyethylene glycol to prevent inhibition of transformation. The recombinants were screened by colony ***hybridization*** . The purified plasmid DNA from pos. clones was confirmed by Southern ***hybridization*** and polymerase chain reaction for the specific insert. The yield of DNA obtained is in sufficient quantity (50-200 ng approx.) for cloning. Approx. 200-300 transformants were obtained per test ligation used of which approx. 50% were recombinants by colony ***hybridization*** . This procedure has been used to clone both human hepatitis B virus and duck hepatitis B virus genome. It is simple, reliable and needs only 100 .mu.L of serum which can be easily obtained.

L14 ANSWER 34 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:231138 CAPLUS
DN 116:231138
TI A rapid DNA extraction method for sugarcane and its relatives
AU Honeycutt, Rhonda J.; Sobral, Bruno W. S.; Keim, Paul; Irvine, James E.
CS Agric. Res. Extension Cent., Texas A and M Univ., Weslaco, TX, 78596, USA
SO Plant Molecular Biology Reporter (1992), 10(1), 66-72 CODEN: PMBRD4; ISSN: 0735-9640
DT Journal
LA English
AB A simple DNA extn. method based on ***CTAB*** pptn. was used to obtain DNA from members of the genus Saccharum and related species. DNA yields and purities were similar for all Saccharum species sampled. The method described here resulted in high quality total DNA suitable for polymerase chain reaction (PCR)-based techniques, as well as restriction endonuclease digestion, Southern ***hybridization*** , and DNA cycle-sequencing.

L14 ANSWER 35 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1992:229172 CAPLUS
DN 116:229172
TI Simple, rapid, reversible staining of nucleic acid immobilized on blots
AU Mendelsohn, Andrew R.; Coleman, John R.
CS Div. Biol. Med., Brown Univ., Providence, RI, 02912, USA
SO BioTechniques (1992), 12(3), 379 CODEN: BTNQDO; ISSN: 0736-6205
DT Journal
LA English
AB Here a method is presented for staining RNA or DNA bound to either nitrocellulose or nylon that is very rapid (15 min or less), is extremely simple (see below) and does not interfere with subsequent probing. The method is based on the hypothesis that cationic detergents such as cetyl pyridinium bromide (CPB) or cetyl trimethylammonium bromide (***CTAB***) should compete for sites on nylon or nitrocellulose which interact nonspecifically with pos. charged or hydrophobic moieties of ethidium. Briefly, the blots are soaked for 5 min at room temp. in a blocking soln. consisting of 0.5% aq. CPB dild. from a 10% CPB/95% ethanol stock. The blots are then placed in staining soln. (0.5% CPB, 5 .mu.g/mL ethidium bromide) for five min at room temp. Finally, the blots are again soaked for 5 min in blocking soln. and then photographed immediately using UV light. UV wavelengths of 302 nm or longer are recommended to avoid crosslinking the nucleic acid, which may result in suboptimal ***hybridization*** signals if subsequent probing is desired. If the blots are to be probed for the first time, simply continue with the recommended prehybridization procedures. If they have already been probed and are now to be reprobed, proceed with the probe stripping protocol recommended by the manufacturer.

L14 ANSWER 36 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:229158 CAPLUS
DN 116:229158
TI Isolation and cloning of DNA fragments from a mycoplasmalike organism associated with walnut witches'-broom disease
AU Chen, J.; Chang, C. J.; Jarret, R.; Gawel, N.
CS Dep. Plant. Pathol., Univ. Georgia, Griffin, GA, 30223, USA
SO Phytopathology (1992), 82(3), 306-9 CODEN: PHYTAJ; ISSN: 0031-949X
DT Journal
LA English
AB Total DNA was extd. using ***CTAB*** buffer from freeze-dried leaves of mature walnut (Juglans nigra) showing severe symptoms of walnut witches'-broom (WWB) disease. DNA of WWB mycoplasmalike organism (MLO) was sepd. from host DNA by CsCl/bisbenzimide gradient centrifugation. A genomic library was constructed from MLO DNA that contained either chromosomal or extrachromosomal DNA fragments. Extrachromosomal NA probes ***hybridized*** to DNA from WWB and pecan bunch (PB) tissues, but not to DNA from periwinkle (Catharanthus roseus) infected with wester X (WX), eastern aster yellows (EAY), and western severe aster yellows (WSAY) MLOs, beet leafhopper-transmitted virescence agent (BLTVA), or Spiroplasma citri (SC). Chromosomal DNA probes ***hybridized*** to DNA from tissues infected by MLOs assocd. with WX, WSAY, or BLTVA, but not PB, EAY, or SC.

L14 ANSWER 37 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1992:35222 CAPLUS
DN 116:35222
TI Concentration and detection of hepatitis A virus and rotavirus from shellfish by ***hybridization*** tests
AU Zhou, Yong Jie; Estes, Mary K.; Jiang, Xi; Metcalf, Theodore G.
CS Div. Mol. Virol., Baylor Coll. Med., Houston, TX, 77030, USA
SO Applied and Environmental Microbiology (1991), 57(10), 2963-8 CODEN: AEMIDF; ISSN: 0099-2240
DT Journal
LA English
AB A modified polyethylene glycol pptn. method for concn. of virus followed by a new method to recover nucleic acid was used to detect hepatitis A virus (HAV) and rotavirus (SA11) in shellfish (oysters and hard-shell clams) by ***hybridization*** tests. Infectious virus, seeded into relatively large quantities of shellfish, was recovered consistently, with greater than 90% efficiency as measured by either in situ ***hybridization*** (HAV) or plaque assay (rotavirus SA11). Viral nucleic acid for dot blot ***hybridization*** assays was extd. and purified from virus-contg. polyethylene glycol concs. Sepn. of shellfish polysaccharides from nucleic acid was necessary before viral RNA could be detected by dot blot ***hybridization*** . Removal of shellfish polysaccharides was accomplished by using the cationic detergent ***cetyltrimethylammonium*** ***bromide*** (***CTAB***). Use of ***CTAB*** reduced background interference with ***hybridization*** signals, which resulted in increased ***hybridization*** test sensitivity. After polysaccharide removal, dot blot ***hybridization*** assays could detect approx. 106 phys. particles (corresponding to approx. 103 infectious particles) of HAV and 104 PFU of SA11 rotavirus present in 20-g samples of oyster and clam meats. These studies show continuing promise for the development of uniform methods to directly detect human viral pathogens in different types of shellfish. However, practical applications of such methods to detect noncultivatable human viral pathogens of public health interest will require addnl. improvements in test sensitivity.

L14 ANSWER 38 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1991:488786 CAPLUS
DN 115:88786
TI Promotion of high-specificity-binding-pair molecular assembly by use of secondary binding pairs
IN Pontius, Brian Wylie
PA Leland Stanford Junior University, USA
SO PCT Int. Appl., 45 pp. CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3 PATENT NO. KIND DATE APPLICATION NO. DATE ---------- ---- -------- ---------- --------
PI WO 9108480 A1 19910613 WO 1990-US7020 19901130 W: AU, CA, JP RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE US 5015569 A 19910514 US 1989-444179 19891201 AU 9170487 A1 19910626 AU 1991-70487 19901130 EP 503000 A1 19920916 EP 1991-901926 19901130 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE JP 05503011 T2 19930527 JP 1991-502158 19901130
PRAI US 1989-444179 A 19891201 US 1990-557227 A 19900724 WO 1990-US7020 A 19901130
AB Methods are provided for improving the rate of assocn. of high specificity primary binding pairs (e.g. enzyme-substrate, antigen-antibody, complementary polynucleotides). The increase in assocn. rate is preferably .gtoreq.10 times and more preferably .gtoreq.100 times. The secondary binding pairs are e.g. (1) acidic and basic polymers contg. multiple glutamic or aspartic acid and lysine or arginine residues or (2) nucleic acids and nucleic acid-binding proteins contg. repeating units. The binding

of the secondary binding pair functions to spatially orient the members of the primary binding pair in close proximity to each other, which increases the probability, and therefore the rate, of binding events between the primary binding pairs, which typically exert less mutual attraction on each other than the secondary binding pair at relatively large distances. The complementary secondary binding pair members can be attached to the primary binding pair members through covalent or noncovalent interaction. Thus, nucleic acid ***hybridization*** was accelerated .gtoreq.100-fold using A1 heterogeneous nuclear ribonucleoprotein. Acceleration of nucleic acid ***hybridization*** using ***CTAB*** is also described.

L14 ANSWER 39 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1991:404559 CAPLUS
DN 115:4559
TI Isolation of high-molecular-weight DNA and double-stranded RNAs from fungi
AU Kim, W. K.; Mauthe, W.; Hausner, G.; Klassen, G. R.
CS Agric. Canada Res. Stn., Winnipeg, MB, R3T 2M9, Can.
SO Canadian Journal of Botany (1990), 68(9), 1898-902 CODEN: CJBOAW; ISSN: 0008-4026
DT Journal
LA English
AB An efficient method for the extn. of DNA and RNA from fungi is described. Urediosporelings and sporidia of 2 basidiomycete species and mycelia from several species of Ascomycetes and Oomycetes were homogenized in a lysis buffer contg. SDS followed by ***cetyltrimethylammonium*** ***bromide*** extn. of carbohydrates in 1.4M NaCl, leaving nucleic acids in the supernatant. After chloroform-isoamyl alc. extn. of proteins, nucleic acids were pptd. with ethanol. Total nucleic acids prepd. in this way contained nuclear, ribosomal, and mitochondrial DNA as well as double-stranded and single-stranded RNA. DNA was eluted from agarose gels and digested with endonucleases, labeled by nick translation, and used for ***hybridization*** without nonspecific background signal. A method is also described for RNase digestion of single-stranded and double-stranded RNA in agarose gels.

L14 ANSWER 40 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1991:222767 CAPLUS
DN 114:222767
TI Isolation, cloning, and base composition of the DNA of the apple proliferation agent
AU Kollar, Andreas; Bonnet, Francoise; Seemueller, Erich; Saillard, Colette; Bove, Joseph M.
CS Inst. Pflanzenschutz Obstbau, Biol. Bundesanst., Dossenheim, Germany
SO Zentralblatt fuer Bakteriologie, Supplement (1990), 20(Recent Adv. Mycoplasmol.), 298-302 CODEN: ZBASE2; ISSN: 0941-018X
DT Journal
LA English
AB DNA from the phloem of proliferation diseased apple trees and from similarly diseased periwinkle plants was extd. by using either a modified urea-phosphate-hydroxyapatite procedure or the ***cetyltrimethylammonium*** ***bromide*** method, resp. Sepn. of mycoplasma-like organism (MLO) DNA from host plant DNA was performed by repeated bisbenzimide-CsCl buoyant d. gradient centrifugation. MLO DNA was obtained as a unique, well-resolved band which was characterized by a lower buoyant d. than the host plant DNA. The G+C content of the highly enriched MLO DNA as detd. by HPLC was 23,7 mol%. Low amts. of 6-methyladenine were also detected. HindIII restriction fragments of enriched MLO DNA were inserted in plasmid pBR322 and were cloned in Escherichia coli. The 19 recombinant plasmids obtained ***hybridized*** with DNA from infected apple and periwinkle but not with DNA from healthy plants. A probe made from one of the recombinant plasmids did not ***hybridize*** with DNA from periwinkles infected with Spiroplasma citri or with the causal MLOs of the following diseases: clover phyllody, chloranty of crucifers, aster yellows, and stolbur. However, ***hybridization*** was obtained with DNA from plum trees and periwinkle plants exptl. inoculated with the apricot chlorotic leaf roll MLO, and with DNA from plum trees showing symptoms of premature bud break.

L14 ANSWER 41 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1991:139400 CAPLUS
DN 114:139400
TI Cationic surfactants in separation of nucleic acids from biological samples for analysis
IN Gushi, Kenji; Kobayashi, Yoshiteru; Hirayasu, Kazunari; Matsura, Shuji
PA Wako Pure Chemical Industries, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 14 pp. CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE ---------- ---- -------- ---------- -------
PI JP 02096630 A2 19900409 JP 1988-222924 19880906
PRAI JP 1988-222924 19880906
AB A biol. sample is treated with a cationic surfactant, preferably quaternary ammonium surfactant (e.g. ***cetyltrimethylammonium*** ***bromide***) for pptn.-sepn. of test nucleic acids, which are dissolved in a high-concn. salt soln. After removal of the surfactant, the nucleic acid may be fixed on a hydrophobic solid-phase (e.g. nitrocellulose or nylon membrane) for genetic or infection diagnosis by e.g. ***hybridization*** test. Detection of hepatitis B virus DNA in human blood serum is given as an example.

L14 ANSWER 42 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1990:587602 CAPLUS
DN 113:187602
TI Method and compositions providing enhanced chemiluminescence from 1,2-dioxetanes by energy tranfer to a fluorescent co-surfactant
IN Schaap, Arthur Paul
PA Wayne State University, USA
SO Eur. Pat. Appl., 37 pp. CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 7 PATENT NO. KIND DATE APPLICATION NO. DATE ---------- ---- -------- ---------- -------
PI EP 352713 A1 19900131 EP 1989-113627 19890724 EP 352713 B1 19930922 EP 352713 B2 19980708 R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE US 5004565 A 19910402 US 1988-224681 19880727 US 6133459 A 20001017 US 1988-265890 19881102 US 4959182 A 19900925 US 1989-317585 19890301 CA 1340574 A1 19990601 CA 1989-601376 19890531 AU 8936645 A1 19900201 AU 1989-36645 19890621 AU 603736 B2 19901122 JP 02069590 A2 19900308 JP 1989-191247 19890724 JP 07091536 B4 19951004 EP 510721 A2 19921028 EP 1992-109406 19890724 EP 510721 A3 19930303 R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE EP 518387

A2 19921216 EP 1992-114339 19890724 EP 518387
A3 19930127 R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE AT 94895 E 19931015 AT 1989-113627
19890724 ES 2013226 T3 19941116 ES 1989-113627
19890724 CN 1040980 A 19900404 CN 1989-106249
19890727 US 6107024 A 20000822 US 1991-677097
19910329 US 5891626 A 19990406 US 1993-21022
19930222 JP 06070797 A2 19940315 JP 1993-187042
19930629 JP 07121237 B4 19951225 IN 176657
A 19960817 IN 1993-MA457 19930706 CN 1088956
A 19940706 CN 1993-120975 19931215
PRAI US 1988-224681 A 19880727 US 1986-887139
A2 19860717 IN 1989-MA454 A1 19890609 EP 1989-113627 A 19890724 US 1991-677097 A1 19910329
OS MARPAT 113:187602
AB In the title method, stable and triggerable 1,2-dioxetanes are incorporated into a structure, e.g. a micelle or monolayer, contg. a surfactant and a fluorescent compd. with a hydrocarbon chain as co-surfactant. Upon decompn. of the dioxetane with an activating agent, e.g. an enzyme or a base, the fluorescent co-surfactant accepts the energy generated by the decompn. of the unstable oxide intermediate, and produces more intense light than is produced by triggering of the dioxetane alone. Compns. useful for the above method are described. The method and compns. are useful for immunoassays and with enzyme-linked DNA probes. Thus, [(3-hydroxyphenyl)methoxymethylene]adamantane (prepd. from reaction of Me 3-hydroxybenzoate and 2-adamantanone) was converted to the di-Na salt of [(3-phosphatephenyl)methoxymethylene]adamantane, which was then photooxygenated to form the di-Na salt of 4-methoxy-4-(3-phosphatephenyl)spiro(1,2-dioxetane-3,2'-adamantane) (I). When I was incorporated in micelles contg. ***cetyltrimethylammonium*** ***bromide*** (***CTAB***) and a fluorescent co-surfactant (II) prepd. from myristoyl chloride and fluoresceinamine isomer 1 and then triggered with alk. phosphatase, there was a 500-fold increase in quantum yield compared to the enzymic reaction in the absence of ***CTAB*** and II. Use of the method and compns. of the invention in retinal S antigen detn. by ELISA and in urease detn. is also described.

L14 ANSWER 43 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1990:455424 CAPLUS
DN 113:55424
TI Nucleic acid extraction method using cationic detergent in an organic solvent for preparation of nucleic acid for ***hybridization*** assay
IN Vermeulen, Nicolaas M. J.; Schwartz, Dennis E.
PA Microprobe Corp., USA
SO Eur. Pat. Appl., 13 pp. CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE ---------- ---- -------- ---------- -------
PI EP 338591 A2 19891025 EP 1989-107273
19890421 EP 338591 A3 19910904 R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE JP 02031696 A2 19900201 JP 1989-100361 19890421 JP 2791367 B2 19980827
PRAI US 1988-184467 A 19880421
OS MARPAT 113:55424
AB Nucleic acids are extd. from biol. samples by pretreating the samples to release the nucleic acids and contaminating materials into an aq. phase. Optionally, the samples may be extd. with an anionic detergent in an org. solvent prior to release of the nucleic acids. The aq. phase is then combined with an org. phase in the presence of a cationic detergent capable of forming water-insol. complexes with the nucleic acids. Usually, a chelant will also be combined with the aq. phase. The complexes are preferentially partitioned into the org. phase and are thus sepd. from the contaminating materials which remain in the aq. phase. The nucleic acids may then be transferred back to a second aq. phase by combining the org. phase with water in the presence of an inorg. salt selected to displace the detergent cation. After sepn. of the org. phase, the second aq. phase contg. the nucleic acids may be used for conventional ***hybridization*** testing. A fecal sample was suspended in glucose 50 mM, EDTA (pH 7.49) 0.2M, and Tris-HCl (pH 8.0) 25 mM and incubated with lysozyme 20 mg/mL for 15 min at 23.degree.. SDS was added to 0.2% to lyse the cells, pronase was added to 1 mg/mL and incubated with the mixt. for 60 min, and insol. material was removed by centrifugation. The aq. phase was mixed vigorously with an equal vol. of hexanol-octane (1:9) contg. 3% ***CTAB*** (wt./vol.) and centrifuged. DNA recovery of 96% was obsd. in the org. phase.

L14 ANSWER 44 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1990:3915 CAPLUS
DN 112:3915
TI A simple and efficient method for isolating genomic DNA from endomycorrhizal spores
AU Cummings, Brian; Wood, Tim
CS NPI, Salt Lake City, UT, 84108, USA
SO Gene Analysis Techniques (1989), 6(5), 89-92 CODEN: GANTDN; ISSN: 0735-0651
DT Journal
LA English
AB A procedure for rapid isolation of genomic DNA from spores of endomycorrhizal fungi is described. Isolation of high-mol.-wt. DNA relies on the lysis of freeze-dried spores and extn. of DNA using mixed alkyl tri-Me ammonium bromide and an excess of proteinase. DNA greater than 30 kb was successfully isolated from Glomus mosseae, G. intraradices, and G. etnuicatum using less than 600,000 spores. All DNA prepns. were suitable for restriction anal., ***hybridizations*** , and cloning.

L14 ANSWER 45 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1989:628414 CAPLUS
DN 111:228414
TI Comparison of two methods for the small-scale extraction of DNA from subgingival microorganisms
AU Smith, G. L. F.; Sansone, C.; Socransky, S. S.
CS Forsyth Dent. Cent., Boston, MA, USA
SO Oral Microbiology and Immunology (1989), 4(3), 135-40 CODEN: OMIMEE; ISSN: 0902-0055
DT Journal
LA English
AB Two methods were compared for the extn. of DNA from small nos. of bacterial cells. The first method involved lysis of cells with SDS in the presence of proteinase K, treatment with ***CTAB*** and pptn. of DNA with isopropanol. In the second method, DNA was extd. by treatment of the cells with guanidine hydrochloride (GHCl) and pptd. with ethanol. Thirty strains of representative gram pos. and gram neg. species were included in the study. Prepns. derived from confluent growth on one-quarter of the surface of agar plates and from 108 cells were subjected to each extn. procedure and analyzed for their content of DNA, RNA, and protein. The suitabilities of the resultant DNA for restriction enzyme digestion and biotin-labeling by a random

primer technique were also assessed. In general, the ***CTAB*** method yielded greater amts. of DNA than the GHCl procedure. RNA was present in most prepns. of both types, but in amts. detectable only by agarose gel electrophoresis. The latter technique also revealed that DNA was not excessively sheared by either procedure. Protein was detected in some ***CTAB*** and GHCl prepns., but was not consistently assocd. with one or the other method. DNA obtained by both methods could be digested by the restriction enzyme EcoR I. In addn., biotin-labeled DNA probes prepd. from ***CTAB*** and GHCl prepns. were capable of ***hybridizing*** with homologous target DNA fixed to nitrocellulose. Since the ***CTAB*** method was consistently successful in recovering DNA from prepns. contg. 108 cells, it may be more suitable for the direct treatment of single colonies taken from primary isolation plates or plaque samples.

L14 ANSWER 46 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1985:128498 CAPLUS
DN 102:128498
TI Purification of cucumber pale fruit viroid
AU Uyeda, Ichiro; Sano, Teruo; Shikata, Eishiro
CS Fac. Agric., Hokkaido Univ., Sapporo, 060, Japan
SO Nippon Shokubutsu Byori Gakkaiho (1984), 50(3), 331-8 CODEN: NSBGAM; ISSN: 0031-9473
DT Journal
LA English
AB Cucumber pale fruit viroid (CPFV) was successfully purified from infected cucumber leaves and stems. Nucleic acids were extd. from the frozen tissue by phenol-CHCl3-SDS and pptd. with EtOH. Polysaccharides were removed by ethylene glycol monomethyl ether treatment and phenolic substances by ***cetyltrimethylammonium*** ***bromide*** . After 2M LiCl treatment, the sol. fraction was treated with DNase and low-mol.-wt. RNAs were obtained. The viroid was further purified by CF-11 cellulose chromatog. and 15% polyacrylamide gel electrophoresis (PAGE). Yield of the purified viroid was .apprx.3-6 .mu.g/200 g of tissue. Five percent PAGE of the purified viroid with urea revealed 2 bands both assocd. with infectivity. CPFV can be extd. better from cucumber plant than tomato plants. Low-mol.-wt. RNAs prepns. from tomato contained much more colored substances than from cucumber. The purified CPFV prepns. still contain a trace of cellular RNAs as revealed by 5% PAGE under denaturing condition. Further purifn. by 5% PAGE under denaturing condition may be necessary in sequencing or ***hybridization*** expts. where the highest purity is required.

L14 ANSWER 47 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1982:177343 CAPLUS
DN 96:177343
TI Transferring DNA from electrophoretically resolved nucleosomes to diazobenzyloxymethyl cellulose: properties of nucleosomes along mouse satellite DNA
AU Reudelhuber, Tim L.; Ball, Dorothy J.; Davis, Alan H.; Garrard, William T.
CS Southwest. Med. Sch., Univ. Texas, Dallas, TX, 75235, USA
SO Nucleic Acids Research (1982), 10(4), 1311-25 CODEN: NARHAD; ISSN: 0305-1048
DT Journal
LA English
AB Electrophoresis fractionates nucleosomes which have different protein compns. A procedure for transferring the DNA components of such electrophoretically resolved nucleosomes to diazobenzyloxymethyl cellulose (DBM-paper) is described. Histones are 1st removed from nucleosome components by electrophoresis in the presence of ***cetyltrimethylammonium*** ***bromide*** (***CTAB***), leaving DNA fragments fixed within the original gel as the ***CTAB*** salts. The DNA is then converted to the Na salt, denatured, and electrophoretically transferred to DBM-paper. The overall pattern of DNA on the resulting blot is visualized either by fluorog. or by immunoautoradiog. This DNA pattern is then compared with autoradiograms obtained after ***hybridizing*** the same blot with specific 32P-labeled probes. By using mouse satellite DNA as a ***hybridization*** probe, the techniques were illustrated, and nucleosomes carrying satellite sequences were demonstrated to be compositionally heterogeneous.

L14 ANSWER 48 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1981:600891 CAPLUS
DN 95:200891
TI Multiple oligo(A) tracts associated with inactive sea urchin maternal mRNA sequences
AU Duncan, Roger; Humphreys, Tom
CS Pacific Biomed. Res. Cent., Univ. Hawaii, Honolulu, HI, 96813, USA
SO Developmental Biology (Orlando, FL, United States) (1981), 88(2), 211-19 CODEN: DEBIAO; ISSN: 0012-1606
DT Journal
LA English
AB Maternal RNA of sea urchin eggs and embryos was analyzed for short poly(A) sequences by digesting hybrids formed between [3H]poly(U) and poly(A) with RNase at 4.degree.. When the undigested [3H]poly(U) was pptd. with ***CTAB*** , all (A)n tracts >6 nucleotides were detected. This assay revealed a poly(A) content severalfold higher than obtained with a similar assay using RNase at higher temps. On polyacrylamide gel electrophoresis, most of the previously undetected (A)n tracts ran as a peak of oligo(A) of <20 nucleotides which accumulated at the dye front. The oligo(A) sequences were resolved into a single peak of (A)10 when sized on Sephadex G100. These (A)10 sequences were assocd. with large mRNA-sized mols. of .apprx.3000 nucleotides av. length which comprised 0.5-2% of the total maternal RNA. However, the (A)10 sequences were not in mRNA mols. contg. 3'-terminal poly(A) of 50-120 nucleotides, nor did they remain in RNA that entered polysomes upon fertilization. ***Hybridization*** studies showed that all sequences represented in the maternal poly(A)-contg. RNA appeared to be present in the RNA mols. contg. only (A)10 sequences. The results suggest that the (A)10-contg. RNA might be incompletely processed mRNA precursor-like mols.

L14 ANSWER 49 OF 49 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1981:1920 CAPLUS
DN 94:1920
TI Simple method of cloning eukaryotic DNA: Production of some new ribosomal genes from Drosophila
AU Kolchinskii, A. M.; Vashakidze, R. P.; Mirzabekov, A. D.
CS Inst. Mol. Biol., Moscow, USSR
SO Molekulyarnaya Biologiya (Moscow) (1980), 14(5), 1098-109 CODEN: MOBIBO; ISSN: 0026-8984
DT Journal
LA Russian
AB DNA sepd. from isolated nuclei of D. melanogaster embryos was treated with restriction endonucleases EcoRI and BamHI and ligated to plasmid pBR322 DNA treated with the same enzymes; the resulting hybrid plasmids were taken up by CaCl2-treated Escherichia coli to give ampicillin-resistant 104 colonies/0.1 .mu.g pBR322 DNA. Ribosomal RNA-coding recombinant plasmids were identified in bacterial lysates by ***hybridization*** with 125I-labeled rRNA sepd. from the Drosophila embryos. The

proportion of ribosomal DNA in the plasmid collection (0.5-0.7%) was comparable to the proportion in the Drosophila genome (0.1-0.7%), so no selection of ribosomal genes occurred. Comparison of the restriction maps of the recombinant plasmids with the pBR322 map gave a map of the segment of the Drosophila genome coding for 19 S and 26 S rRNA. Three clones contg. repetitive DNA inserts from the 26 S rRNA gene were identified. Advantages of the use of 2 nucleases in prepg. recombinant plasmids and of the use of ***cetyltrimethylammonium*** ***bromide*** in centrifugal sepn. of recombinant plasmids are discussed.

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